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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,688	01/24/2006	Kenjiro Miyano	NAII127017	2402
26389 7590 10/31/2007 CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347			EXAMINER BUI PHO, PASCAL M	
			ART UNIT 2878	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,688	Applicant(s) MIYANO ET AL.	
	Examiner Pascal M. Bui-Pho	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is responsive to communications filed on 09 August 2007. Presently, claims 1-8 remain pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The mere duplication of a claim preamble is herein not sufficient.

Drawings

3. The drawings were received on 09 August 2007. These drawings are acceptable.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Theodore et al. (US 5,338,932) in view of Yasutake (US 5,324,935).

With regards to claims 1-3 and 5-7, Theodore et al. disclose in Fig. 1 a scanning probe microscope comprising: a cantilever (12) with a tip probe (14) fitted at an end thereof; a light-emitting section (26); and a light-receiving section (27), the light-emitting section comprising a

laser light-emitting element (Column 3, lines 21-24), wherein light irradiates from the light-emitting section towards the surface of the cantilever at an oblique angle, the light receiving section comprising a photodiode light-receiving element wherein light reflected by the surface of the cantilever at an oblique angle guides the light towards the light receiving element (Column 3, lines 26-29). Theodore et al. however lack an inclusion of an input optical fiber to irradiate light from the light-emitting section towards the surface of the cantilever and an output optical fiber to receive light reflected by the surface of the cantilever and guiding the light towards the light receiving element. In an analogous field of endeavor, Yasutake discloses in Fig. 1 a scanning probe microscope comprising: a cantilever (2) with a tip probe (30) fitted at an end thereof; a light-emitting section (6); and a light receiving section (8), the light-emitting section comprising a laser diode (Column 5, lines 60-61) and an input optical fiber waveguide (7), wherein the input waveguide irradiates light from the light-emitting section towards the surface of the cantilever, the light receiving section comprising a plurality of output optical fiber waveguides (Column 4, lines 36-47) and photodiodes (8a, 8b), and the output waveguides guide light reflected by the surface towards the photodiodes. Selecting known available means to reduce light loss would have been obvious to one of ordinary skill in the art. Accordingly, at the time of the invention, it would have been obvious to provide input and output optical fiber waveguides, as taught by Yasutake, in order to provide more accurate and reliable sensing results.

With regards to claim 4, Theodore et al. and Yasutake disclose a scanning microscope as claimed, but lack a clear disclosure of optics having substantially spherical-shaped lenses with substantially flat facing surfaces adjacent each other. Selecting known available optics to provide greater control of light modulation would have been obvious to one of ordinary skill in

the art. Accordingly, at the time of the invention, it would have been obvious to modify Theodore et al. and Yasutake by incorporating spherical-shaped lenses with flat facing surfaces adjacent each other in order to reduce light loss and acquire more reliable sensing results.

With regards to claim 8, Theodore et al. and Yasutake disclose a scanning microscope comprising, among other features, input and output waveguides (7, Column 4, lines 36-47 of Yasutake), but lack a clear disclosure of said waveguides being separated. Providing separate input and output waveguides in order to reduce light interference would have been obvious to one of ordinary skill in the art. Accordingly, at the time of the invention, it would have been obvious to modify Theodore et al. and Yasutake by utilizing separate input and output optical fibers in order to provide more reliable sensing results.

Response to Arguments

6. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Telephone/Fax Information

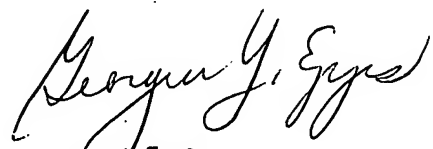
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pascal M. Bui-Pho whose telephone number is (571) 272-2714.

The examiner can normally be reached on Monday through Friday: 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pascal M. Bui-Pho
Examiner, Art Unit 2878
25 October 2007


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800